REMARKS

Claims 1-3 and 7-24 remain pending in this application.

The Examiner rejected claims 1-3, and 10-22 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,934,384 ***(Hein)***. Specifically, the Examiner asserts that Hein, at col. 3, line 54 through col. 4, line 24 (and Figure 2), teaches the features of claim 1. Applicant respectfully traverses this rejection. Among other things, claim 1 calls for employing a common analog-to-digital (A/D) converter for the purposes of processing voice signals and ring trip detection. That is, the claims calls for converting a received portion of the ringing signal to a digital signal using the digital-to-analog converter that is used to process voice signals.

Hein at least does not teach using a common A/D converter for converting both the voice signals and a portion of the received ringing signal. Hein describes that the signal processor 210 of Figure 2 includes a digital interface for digitizing voiceband data. Hein, col. 4, lines 4-6. A few lines later, Hein describes that the "digital interface" is a "codec" that performs the voiceband digitization. *Id.* at col. 4, lines 16-20. Indeed, the remainder of the Hein reference reinforces the point that voiceband data digitization is performed by the "codec." *Id.* at col. 8, lines 18-22 (describing a "codec" for "bidirectional communication of voiceband data between the analog subscriber loop and a digital interface of the signal processor"). While Hein describes that the codec digitizes voiceband data, it does not teach that this codec also coverts the received portion of the ringing signal to a digital signal. In contrast, claim 1 calls for converting a received portion of the ringing signal to digital signal using the same A/D that is used for converting voice signals. For at least the foregoing reason, claim 1 and its dependent claims are allowable. Furthermore, claims 13-18 and 24 are also allowable for at least this reason.

Hein does describe that the "digital interface" signal includes a "processor interface 214" (see Figure 2) to "enable programmatic or dynamic control" of various subscriber loop control parameters, including ringing currents. *Id.* at col. 4, lines 9-16. However, this passage simply describes that these control parameters, such as ringing currents, can be "dynamically" controlled. It does not suggest or describe (1) receiving a portion of the transmitted ringing signal; (2) converting the received portion of the ringing signal to a digital signal using an A/D; and (3) where that A/D converter is also used to covert the voice signals. In fact, according to Hein, the processor interface 214 (which processes the "ringing currents") is different from the "codec" (which digitizes the voiceband data). Specifically, Hein describes that the process interface 214 provides for "dynamic" control of loop parameters, whereas the "codec" digitizes the voiceband data. *Id.* col. 4, lines 7-15; col. 4, lines 16-20. Thus, Hein neither discloses nor suggests that the codec that processes the voiceband data also digitizes any portion of the received ringing signal. In fact, there is nothing in Hein that suggests or describes that any of the "control" signals (such as battery feed, ringing signals, etc.) are even converted to digital form by the signal processor 210. To the contrary, Hein describes that such signals remain in analog form. *Id.* at co. 5, lines 36-40 (stating that the battery feed and other relatively high voltage signals are delivered to the subscriber loop "in accordance with the analog linefeed control signals provided by the signal processor 210"). Thus, putting aside the issue of whether Hein teaches a common A/D that converts both the voice and a portion of the received ringing signal to digital form, there is nothing in Hein that describes that at least a portion of the received ringing signal is converted to digital form. For at least these reasons, Hein is deficient.

Claim 7 is also allowable over Hein because Hein at least fails to disclose a first circuitry comprising an analog-to-digital converter that is used for processing of voice signals and for DC

feed control and a second circuitry that is capable of receiving at least a portion of a ringing signal provided to a subscriber line and providing the portion with ringing signal to the analog-to-digital converter of the first circuitry. For at least this reason, claim 7 and its dependent claims are allowable.

Claim 9 and its dependent claims are allowable because Hein at least does not teach a switch capable of coupling the input and output terminal with the feedback path in response to receiving a control signal.

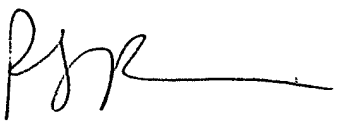
Claims 19-22 are allowable because Hein at least fails to teach or suggest coupling the input and the output terminal of the first path in response to receiving the control signal.

In light of the reasons presented above, Applicant respectfully asserts that the pending claims are allowable. Accordingly, a Notice of Allowance is respectfully solicited. If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Houston, Texas telephone number (713) 934-4064 to discuss the steps necessary for placing the application in condition for allowance.

Respectfully submitted,

WILLIAMS, MORGAN & AMERSON, P.C.
CUSTOMER NO. 23720

Date: 8/28/06

By: 

Ruben S. Bains, Reg. No. 46,532
10333 Richmond, Suite 1100
Houston, Texas 77042
(713) 934-7000
(713) 934-7011 (facsimile)
ATTORNEY FOR APPLICANT(S)